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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/533,951

Applicant(s)

MURAKAMI, HAJIME

Examiner

Helen O. Chu

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The Applicant's amendments were received on April 3, 2008. Claims 1 and 3 have been amended.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action.
3. The Examiner is withdrawing the finality of the last Office Action dated January 3, 2008.

Claims Analysis

4. Tables 1-3 indicate three examples of the instantly claimed invention of which have 0wt% of hydrocarbon compound having a molecular weight of not greater than 310.
5. Regarding claim 2, please note that since claim 1 has no requirement of the presence of hydrocarbon compound having a molecular weight of not greater than 310 by demonstrating in Tables 1-3 of Applicants specification, that 0 wt% can be incorporated in the claimed invention, claim 2 will be interpreted as such.

Claim Rejections - 35 USC § 102

6. The rejections under 35 U.S.C. 102(b), as anticipated over Nobuaki on claims 1 and 4 are maintained.
7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as anticipated over Nobuaki (JP Publication 3-297063).

In regard to claims 1 and 4, the Nobuaki reference discloses a carbon rod for a manganese dry cell in which the carbon rod has only been impregnated with a paraffin wax consisting of 300-500 molecular weights.

Claim Rejections - 35 USC § 102/103

9. The rejections under 35 U.S.C. 102(b), as anticipated by or, in the alternative, under over 103(a) as obvious over Nobuaki on claim 2 is maintained.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claim 2 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nobuaki (JP Publication 3-297063).

It is noted that claim 2 is a product-by-process claim. "Even though product-by-process claims are limited by and defined by the process, determination of patentability

is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since the hydrocarbon of lower molecular weight is similar to that of the Applicant's, Applicant's process is not given patentable weight in this claim.

Claim Rejections - 35 USC § 103

12. The rejections under 35 U.S.C. 103(a) as unpatentable over Nobuaki in view of Yukifumi et al. as evidence by Nagasawa et al. on claim 3 is maintained.

13. The rejections under 35 U.S.C 103(a) as unpatentable over Nobuaki in view of Yukifumi et al. as evidence by Nagasawa et al. in further view of Kenichi on claim 5 is maintained.

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nobuaki (JP Publication 3-297063) as applied to claims 1, 2 and 4 above, and further in view of

Yukifumi et al. (JP Publication 07-272702) as evidence by Nagasawa et al. (US Patent 4,157,317)

The Nobuaki reference teaches the elements of claims 1, 2 and 4 as discussed in the previous rejection and incorporated herein but does not teach density of the carbon rod. However, the Yukifumi et al. reference teaches that carbon rod of high density is used so that it is hard and it provides cushioning (Paragraph 7). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the carbon density of the carbon rod as disclosed by Nobuaki reference to choose the instantly claimed value through process optimization as it is motivated by Yukifumi et al., since it has been held that the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable values involve only routine skill in the art. See *In re Boesch*, 205 USPQ 215 (CCPA 1980). Furthermore, as evidence by Nagasawa et al. (US Patent 4,157,317), when the density is less than 1.6 g/cm^3 the carbon rod would not have a sufficient strength (Column 5, Lines 5-10). This would lead one of ordinary skill to try a value greater than 1.6 g/cm^3 or any values sufficient to obtain a carbon rod that would supply sufficient strength.

16. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nobuaki (JP Publication 3-297063) in view of Yukifumi et al. (JP Publication 07-272702) as evidence by Nagasawa et al. (US Patent 4,157,317), as applied to claims 1-4 above, and further in view of Kenichi et al. (JP Publication 05-290820).

The Nobuaki and the Yukifumi et al. reference teaches the elements of claims 1-4 as discussed in the previous rejections and incorporated herein but does not teach a

polybutene substance as a sealant. However, the Kenichi et al. reference teaches a polybutene sealant substance would improve the sealing property during performance deterioration or high temperature storage (Abstract). Therefore, it would be obvious to one of ordinary skill at the time the invention was made to incorporate a polybutene sealant as taught by the Kenichi et al. reference into the manganese dry cell as taught by Nobuaki and Yukifumi et al. reference to prevent the manganese dry cell from liquid leakage.

Response to Arguments

17. Applicant's arguments filed April 3, 2008 have been fully considered but they are not persuasive.

Applicants' principal arguments are:

- a. The Applicants argue *"Contrary to the Examiner's assertions, Example 1 clearly teaches 0.5wt% hydrocarbons."* The Examiner disagrees, while Example 1 does teach 0.5wt%, three out of the four inventions and as it is claimed also teaches 0wt% of hydrocarbon with a MW of not greater than 310 which means that a hydrocarbon of MW of not greater than 310 is not necessary.
- b. The Applicant argues, *"It is apparent that the Examiner mistakenly assumes that because (A) there is no teaching of a molecular weight of not greater than 310 in an amount of not greater than 0.5 wt % in Nobuaki et al. then it must mean (B) that 0 wt. % of the Nobuaki et al. material has a molecular weight of not greater than 310. As one of ordinary skill in this art with a high school understanding of logic would*

realize, if A then B does not necessarily follow Nobuaki does not suggest that only the paraffin wax is impregnated into the carbon rod, and the paraffin wax contain hydrocarbon compounds having a molecular weight of not greater than 310 in an amount of not greater than 0.5 wt.%, as required by claims 1 and 3. Nobuaki teaches impregnating the carbon rod with a mixture of paraffin wax and crystalline polyolefin resin (see Nobuaki Examples). Therefore, Nobuaki does not disclose that only the paraffin wax is impregnated into the carbon rod, as required by claims 1 and 3."

Interestingly, the Applicants insinuate that (A) the Examiner **mistakenly assumes** and (B) "one of ordinary skill in the art with a high school understanding of logic" would not have mistakenly assumed. **First, the Examiner would like to address that these comments are insulting, unnecessary and unprofessional.** Second, the Applicants invention include no amounts or zero amounts of hydrocarbons with MW of not greater than 310 as it is demonstrated in Tables 1-3 of Applicants' specification. As it is disclosed in the Nobuaki reference, an impregnating agent composition which includes, as a main component, **either** a hydrocarbon compound with a molecular weight of 300-500 inclusive, as a main component of n-paraffin **OR** a microwax comprising of an isoparaffinic and cycloparaffin hydrocarbon mixture with a molecular weight of 35-60 and the melting point of which has been designated at 90 degrees Celsius or higher by adding crystalline polyolefinic resin to the former (i.e. to the microcrystalline wax). In the Examples presented, the Nobuaki reference only discloses a microcrystalline wax with a molecular weight of 35-60 in which a crystalline polyolefinic resin is mixed. This is

consistent to what was stated. Therefore, the Nobuaki reference does disclose the claim invention.

c) The Applicant argues that the Examiner has ignored the evidence of unexpected results, as the Examiner has not commented on the evidence of unexpected results in Table 3. However, the Examiner has not ignored any unexpected results over the prior art. The Examiner is stating that the "unexpected results" of the Applicants are the same as the Nobuaki et al. reference because it is the same invention. The arguments as presented by the Applicants never once state how the unexpected result is novel over the Nobuaki reference, the only argument pertaining to the subject at hand is that the Nobuaki does not show any "unexpected results" and for that matter the same "unexpected results" as the Applicants. Nevertheless, the unexpected results were not a claimed limitation, therefore since the Nobuaki reference have the same compounds in the invention as that of the Applicants, the Applicants invention is not novel over the prior art. The Applicants further argue that, *"Accordingly, though the Examiner admits Nobuaki does not disclose these features, the Examiner alleged that they would have been obvious based on process optimization. However, it is respectfully submitted that the Examiner's reliance on routine skill in the art to allege obviousness of the claimed features is in legal error. The "process optimization" basis for an obviousness rejection can only be relied upon by the Examiner if the prior art first recognize the modified parameter as a result-effective variable. In the instant case, only Applicant has recognized and considered the importance of the claimed parameter (e.g., amount of paraffin wax containing a hydrocarbon compound having a molecular*

weight of not greater than 310), as a result-effective variable, so that the Examiner can not rely on the obviousness-theory of "process optimization" as a basis for asserting obviousness thereof." First, The invention as disclosed by Nobuaki is the same invention as the Applicants and therefore one of ordinary skill would note that the "unexpected results" would be the same. The Applicants has not established how the unexpected results as claimed by the Applicants would the make the invention novel over the Nobuaki reference. The Examiner did not reject unexpected results based on process optimization. The Examiner had used process optimization for the claimed invention of the density for the carbon rods. The Examiner does admit that the Nobuaki does not disclose the densities of the densities of the carbon, otherwise claim 3 would have been rejected under 35 U.S.C 103(a) under Nobuaki solely. However, restating the rejection, " *Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nobuaki (JP Publication 3-297063) as applied to claims 1, 2 and 4 above, and further in view of Yukifumi et al. (JP Publication 07-272702) as evidence by Nagasawa et al. (US Patent 4,157,317)* " The prior art of Yukifumi et al. as evidence By Nagasawa et al. (prior art) does recognize the modified parameter as a result-effective variable. As it is disclosed by Applicants specification, Table 1 Examples 2-4 with no hydrocarbons with MW that is less than 310, that is the invention with a carbon rod and hydrocarbons with MW of 300-500 can still achieve a carbon density as claimed and the same "unexpected results"

D) Applicant continues to argue, " *in the instant case, the cited prior art is silent regarding amount of paraffin wax containing a hydrocarbon compound having a*

molecular weight of not greater than 310, as achieving a recognized result; so that there is no basis for alleging obviousness thereof based on process optimization. Accordingly, it is respectfully submitted that the claimed features would not have been obvious in view of Nobuaki because the cited prior art does not recognize the claimed parameters as achieving a recognized result.

Specifically, Nobuaki fails to satisfy the legal requirement for the prior art to first recognize the amount of paraffin wax containing a hydrocarbon compound having a molecular weight of not greater than 310 as a result-effective variable. Namely, Nobuaki is silent as to the amount of paraffin wax containing a hydrocarbon compound having a molecular weight of not greater than 310 achieving a recognized result. Accordingly, the cited prior art does not support the Examiner's allegation that the optimum values of the parameter can be characterized as process optimization." It appears to the Examiner the Applicant is arguing the same points repetitive. Again Tables 1-3 of Applicants specification indicates that no hydrocarbon having a molecular weight of not greater than 310 is required to achieve these "unexpected results" and therefore, the claim limitations of 0-0.5wt% wherein 0 wt% is included in the invention is interpreted as such.

E) Applicants argue, "Only Applicant have recognized and considered the parameter (e.g., the amount of paraffin wax containing a hydrocarbon compound having a molecular weight of not greater than 310) in relation to discharge performance of manganese dry batteries to achieve the disclosed results described in the present specification. Nobuaki is completely silent as to the improvement in discharge performance achieved by the present invention, and does not enable process

optimization of the claimed parameter" In response to the Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Applicants disclosure, such as a reconstruction is proper. *In re McLaughlin*, 443 F.2d 1392; 170 USPQ 209 (CCPA 1971)

F) Applicant argues, "*The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A.v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628,631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Nobuaki does not disclose only the paraffin wax is impregnated into the carbon rod and the paraffin wax containing a hydrocarbon compound has a molecular weight of not greater than 310 in an amount of not greater than 0.5 wt%, as required by claim 1, Nobuaki does not anticipate claim 1." The Examiner has considered all of the disclosure in a single of each element of the claimed invention. Tables 1-3, Examples 2-4 does not suggest that there are ANY hydrocarbon

of molecular weight not greater than 310 in amounts to achieve the Applicants invention and therefore since claim 1 and 3 specifically states that the hydrocarbons of MW not greater than 310 is in amounts not greater than 0.5 wt% which includes 0wt% as it is disclose the Applicants specification the Nobuaki reference discloses the same invention as the Applicants.

F) Applicant argues, "*There is no suggestion in Nobuaki, Yukifumi et al., and Nagasawa et al. to modify the positive electrode current collector of Nobuaki so that only the paraffin wax is impregnated into the carbon rod and the paraffin wax containing a hydrocarbon compound has a molecular weight of not greater than 310 in an amount of not greater than 0.5 wt%, as required by claims 1 and 3, nor does common sense dictate the Examiner-asserted modification. The Examiner has not provided any evidence that there would be any obvious benefit in making the asserted modification of Nobuaki. See KSR Int'l Co. v. Teleflex.*" The Examiner has never rejected the claim using KSR, however, as pointed out by the Applicants, in this case *KSR Int'l Co. v. Teleflex* does apply. Common sense teaches that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of the patents together like pieces of a puzzle. A person of ordinary skill is also a person of ordinary creativity, not an automaton. The question to be answered is whether the claimed invention is a product of innovation or merely the result of common sense, ordinary creativity, and ordinary skill. **KSR v. Teleflex** A patent claim can be proved obvious merely by showing that the combination of elements was obvious to try. When there is a design need or market pressure to solve

a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense. **KSR v. Teleflex**

G) The Applicants argue, “*The Examiner averred that Nobuaki and Yukifumi et al. substantially disclose the claim elements but do not teach the polybutene sealant. The Examiner alleged that Kenichi et al. disclose a polybutene Sealant and that it would have been obvious to incorporate a polybutene sealant into the manganese dry cell of Nobuaki and Yukifumi et al. to prevent liquid leakage.*

The combination of Nobuaki, Yukifumi et al., Nagasawa et al., and Kenichi et al. do not suggest the claimed manganese dry battery because Kenuchi et al. do not cure the deficiencies of Nobuaki, Yukifumi et al., and Nagasawa et al. Keniehi et al. do not suggest only the paraffin wax is impregnated into the carbon rod and the paraffin wax containing a hydrocarbon compound has a molecular weight of not greater than 310 in an amount of not greater than 0.5 wt%, as required by claims 1 and 3.

The dependent claims are allowable for at least the same reasons as the respective independent claims from which they depend, and further distinguish the claimed positive electrode current collector and manganese dry battery” It appears the Applicants are continuously arguing the same points. Please refer to the response to argument in section A

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen O. Chu whose telephone number is (571) 272-5162. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HOC

William Krynski

/William Krynski/ QAS/ TC 1700